

WHAT IS CLAIMED IS:

1. A body motion detector for use with a user, comprising:
 - a body motion detecting device to detect body motion accompanying repetitive motion of the user;
 - a determining device to determine whether a detection result of the body motion detecting device is within a predetermined reference range; and
 - a notifying device to generate a notifying signal whenever a determination result by the determining device is within the predetermined reference range.
2. The body motion detector according to Claim 1, the detection result being the motion intensity of the repetitive motion.
3. The body motion detector according to Claim 1, the detection result being the motion intensity and the motion period of the repetitive motion.
4. The body motion detector according to Claim 2, the predetermined reference range being either above a lower limit reference value set by the user or between the lower limit reference value and an upper limit reference value, which are set by the user.
5. The body motion detector according to Claim 3, the reference range for the motion period being calculated from motion time and an accumulated motion frequency, which are set as targets by the user.
6. The body motion detector according to Claim 3, the reference range for the motion period being calculated from motion time and motion calories consumed, which are set as targets by the user.
7. The body motion detector according to Claim 1, the detection result being either the motion intensity and accumulated motion frequency of the repetitive motion or the motion intensity, motion period, and accumulated motion frequency of the repetitive motion.
8. The body motion detector according to Claim 7, the predetermined reference range for the motion intensity and the motion period being either above the lower limit reference value set by the user or between the lower limit reference value and the upper limit reference value, which are set by the user, and
 - the predetermined reference range for the accumulated motion frequency being below an accumulated target frequency set by the user.
9. The body motion detector according to Claim 8, when the accumulated motion frequency reaches the accumulated target frequency, the notifying device generating a notifying signal different from the notifying signal and resets the accumulated motion frequency to 0.

10. The body motion detector according to Claim 1, the body motion detecting device including at least one of an acceleration sensor, a pressure sensor, and a speed sensor.
11. A body motion detector for use with a user, comprising:
 - a body motion detecting device to detect body motion accompanying repetitive motion of the user;
 - a determining device to determine whether a detection result of the body motion detecting device is within a predetermined reference range;
 - a notifying device to generate a notifying signal whenever a determination result by the determining device is within the predetermined reference range;
 - a biological reaction detecting device to detect a biological reaction of the user; and
 - a calculating device to calculate a reference range from the detection result of the biological reaction detecting device.
12. The body motion detector according to Claim 11, the biological reaction detecting device including a pulse wave detecting device to detect a pulse wave of the user; and
 - a pulse rate calculating device to calculate the pulse rate from the detection result of the body motion detecting device and the detection result of the pulse wave detecting device.
13. The body motion detector according to Claim 12, the predetermined reference range being changed so that the pulse rate is within the range of a target pulse rate when the pulse rate is beyond the range of a target pulse rate previously set by the user even if the determination result is within the predetermined reference range.
14. The body motion detector according to Claim 12, the pulse rate calculating device analyzing frequencies of the detection signals of the pulse wave detecting device and the body motion detecting device using FFT (fast Fourier transform) processing.
15. The body motion detector according to Claim 1, the notifying signal being at least one of sound from an alarm, vibration from a vibration motor, and light from an LED (light emitting diode).